DOCUMENT RESUME

ED 210 629 CS 006 372

AUTHOR Goodman, Yetta M.; Altwerger, Bess
TITLE Print Awareness in Pre-School Children: A Working Paper. A Study of the Development of Literacy in Preschool Children. Program in Language and Literacy Occasional Paper No. 4.
INSTITUTION Arizona Univ., Tucson. Coll. of Education.
PUB DATE Sep 81
NOTE 77p.

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Childhood Attitudes; Cognitive Ability; *Family Environment; *Perception; *Perceptual Development; *Prereading Experience; Preschool Children; Preschool Education; *Reading Attitudes; Recognition (Psychology)
IDENTIFIERS *Print Awareness

ABSTRACT

A study was conducted to explore preschool children's awareness of and responses to print and their concepts of reading and writing. Eleven children, aged three, four, and five years, were given three print awareness tasks in which they were asked to identify a common household product first by its complete label, then by the same label without accompanying pictures or designs, then by the name of the product printed in black. In a fourth and fifth task, the subjects were interviewed to discern their concepts of reading and writing. The sixth task involved book handling designed to reveal the subjects' knowledge and use of print in books. The results of the first three tasks indicated that the more context supporting the print of a product label, such as color or pictures, the greater the frequency of appropriate identification. When print was presented without any supporting context, the children became restless and impatient. The results of the fourth task indicated that the majority of the subjects had already developed the notions that they did not know how to read, that reading would be hard to learn, and that someone would have to teach them how. In task five, the younger children produced scribble or pictures when asked to write, while the older children produced words or letters. The sixth task indicated that the subjects had little awareness of the purpose of print in books. (Product labels and interview questions are appended.)
(HTH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED210629

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Print Awareness in Pre-School Children:

A Working Paper

A Study of the Development of Literacy in Preschool Children

Yetta M. Goodman
University of Arizona

Bess Altwerger
University of New Mexico

A Research Paper
September, 1981 No. 4

Occasional Papers
Program in Language and Literacy
Arizona Center for Research and Development
College of Education
University of Arizona

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Kenneth S. Goodman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Co-directors:
Kenneth S. Goodman
Yetta M. Goodman
402 Education, Bldg. 69
University of Arizona
Tucson, AZ 85721

CS006372

Statement of Purpose

This series of working papers will provide a report of our current thinking and make available the work of our program to those who may be interested. It is our intent to stimulate an on-going dialogue with other professionals who share similar interests in educational theory and practice. We welcome responses from readers. Comments may be directed to the author of the paper or to the directors of the program.

Some but not all of the papers may appear in other publications in modified form. We are making this publication available at cost.

Print Awareness in Pre-School Children:

A Working Paper

A Study of the Development of Literacy in Preschool Children

Yetta Goodman
Bess Altwerger

Introduction

In recent years there has been increased interest in exploring the extent to which literacy develops prior to school instruction. Researchers are reappraising past positions which held that children must reach a certain biological or maturational level before reading and writing could usefully be encouraged. Delacato (1959) stressed the importance of neurological development. Havighurst (p. 33) stated that "the eyes are not biologically ready for reading in most cases before the sixth year." In terms of writing, Havighurst cautioned that the muscles of fingers, hands, and arms are not sufficiently developed for writing before six years old. Others, such as Heffernon (1960) and Betts (1936) suggested that reading and writing instruction was futile before certain developmental prerequisites were first mastered, at about age six.

Nevertheless, case studies by Torrey (1969), Krippner (1963), Reger (1966), Soderberg (1977), Bissex (1980), and Haussler (1977) among others suggest that some children do, indeed, learn to read and write before entering school. Durkin (1966) identified and described forty-nine children who were early readers. Read (1971) and C. Chomsky (1971) have provided evidence that four-year olds write before school showing intuitive awareness of the phonological system of the English language. These examples, however, have been viewed as exceptional, and not to be generalized to the larger population of preschoolers.

At the same time that some children have been perceived as developing

reading and writing, Jesse Reid (1966) and John Downing (1970-1972) have interviewed children and discovered that in response to questions about language, such as "show me a word," "what is reading?" "write for me," "draw a picture," young children often do not use labels the way adults do and are not able to articulate functions of reading and writing. In discussing the problems young readers may have in locating what they should be attending to during reading instruction, Marie Clay (1975, p. 4) states in What Did I Write?:

> (the teacher) assumes that children know that a word is built out of letters, but 50 percent of children still confuse the verbal labels "word" and "letter" after six months of instruction. She also assumes that the children know that the left-hand letter following a space is the 'start' of a word. Often they do not. She says, 'look at the first letter. It says s-s-s.' and her pupils make s-noises. But Johnny who knows only 'Mother' and 'I' scans the text haphazardly for something relevant, sights the coma and makes s-noises'.

Some researchers, recognizing how powerful social-cultural influences can be on literacy development, have observed that a print-oriented society has strong impact on the learning of young children, and have begun to document larger and more diverse samples of preschoolers -- not just "exceptional cases" -- to determine the extent to which they are aware of and responding to print in their environments.

Bennett (1971) looked at children's responses to photographs of forty food packages from a local supermarket. He states that children as young as two years and six months could successfully identify some of the photographs.

Ylisto (1977) investigated reading development in a similar manner. She hypothesized that preschool children perceive printed words as concrete ideas and that this process begins naturally in an environment which provides stimulation

and opportunity to interact with print. Ylisto concludes that some young children learn to read before formal instruction by discovering that printed word symbols are substitutes for auditory symbols.

Jones and Hendrickson (1970) studied knowledge of environmental print. Three-, four- and five-year olds were tested to discover the extent to which they were attending to print on food product containers frequently advertised during familiar TV programs, and to titles of children's books they'd been read. It was found that the youngsters were more familiar with print on food containers than with titles of children's books, and that the children used the format (color, design, etc.) of the containers in responding to the print. These researchers suggest that "there are developmental levels through which children pass in learning to relate to written symbols." (p. 267)

In terms of writing, as early as 1932 researchers such as Legrun (1932) and Hildreth (1936) have noted that writing develops from the ages of three to six without direct instruction. Legrun outlined five stages in early writing development from unorganized scribbles to a differentiation of forms with linear arrangement and occasional interpositions of true letters and figures.

More recently, Lavine, Wheeler and others report that children's writing gradually develops characteristics of alphabetic writing such as linearity and horizontal orientation, without any direct formal instruction. Lavine finds that children are able to distinguish pictures from writing by age three (Gibson & Levin, 1976).

Clay (1975) suggests that children's writing should be viewed as a developmental language system, and that children's writing "errors" are actually signs of progress reflecting the use of rules or ambitious attempts to communicate meanings. Clay provides principles of early writing to guide the observation and study of children's writing samples.

Others such as Charles Read (1971) and Carol Chomsky (1971, 1975) have focused on the "invented spellings" which children initiate in their early writing. Analysis of "invented spellings" reveal that when children's writing is allowed to develop naturally without direct, formal instruction, their spelling attempts are not haphazard or random, but rather are rule governed, systematic and logical. In his study of preschoolers invented spellings, Read (1975) notes consistent spelling strategies such as omission of preconsonantal nasals and the use of the letter name for representing certain phonemes.

> "Each child learned the conventional names of the letters of the alphabet at a relatively early age, sometimes as early as 2 years, 6 months. By questioning and observing adults, they also learned a general orthographic principle. They seem to have inferred that letters represent sounds, and that at least one of the sounds represented by a letter is usually contained in the name of that letter." (Read, p. 330)

Although these studies have contributed considerably to our knowledge of literacy development in preschoolers, beginning in 1973, Goodman conducted informal investigations with young children in an effort to discover:

1. Questions about print that are most easily understood by preschoolers and that will elicit the most coherent responses.
2. The items (food and household product labels, store or street signs, etc.) that children are most familiar with in their environment.
3. The length of time children will attend to particular tasks.
4. The recording devices that most accurately and clearly record the data collected during research sessions.

These questions were answered in the course of designing the present study. Findings from the study cannot be statistically generalized to large populations due to the small number of subjects. But it provides a depth analysis of what some children can do and that provides a significant base

for understanding literacy development.

The Research

The study was conducted in Tucson, Arizona to explore preschoolers' awareness and responses to environmental print, their attitudes and concepts of reading and writing, and their knowledge and familiarity with print in books. The use of contextual clues surrounding the print and the children's use of terminology related to literacy were also noted.

Subjects

Eleven children served as subjects. A personal data form was completed for each subject which listed the name, date of birth, place of birth, and languages spoken for each child, plus the occupations, educational level and languages spoken by parents or guardians. Additonal information concerning those living in the home (siblings, grandparents, foster parents) and the home environment (TV in home, etc.) was also collected. (See appendix A for form)

There were four three-year olds, three four-year olds and four five-year olds. All children attended an agency day care center in Tucson, Arizona, where minimal direct teaching is conducted. A separate small room of the center was used for data collection. The subjects were from a variety of racial and ethnic backgrounds, including Arab, Chicano, Black and Anglo, and represented a range of economic levels from lower working class to lower middle class. In five cases out of ten, the parents were divorced or separated. All of the children were English speaking, though several were bilingual.

Tasks

Six tasks were administered to each child. The first three tasks, the Print Awareness Tasks, were designed to reveal the subjects' print awareness

and use of contextual, supporting cues. Labels, carefully selected from an array of household, toy and food products, along with street signs were mounted on tag board and presented one at a time to the subjects. (See appendix B) In the first task, the whole label was presented. For example, subjects were shown the complete front panel of a Rice Krispies box. The same labels were presented again in Task II. They retained their stylized print and color but were stripped of all familiar accompanying pictures and designs. In Task III, all supporting context - pictures, design, color - was removed from the original labels except the graphic unit itself which was printed in manuscript form in black ink on white index cards. (The items presented to the children are listed in appendix C with an example of each type of contextualization for the three tasks). The tasks were presented a week apart with the same items presented each time in different order. In the fourth and fifth tasks, the subjects were interviewed to discern concepts of reading and writing, their language use, and their attitudes toward reading and writing. A writing sample was also collected during task five. The sixth task, the Book Handling Knowledge Task, was designed to reveal the subjects' knowledge and use of print in books. (More specific descriptions of the materials for each task, the questions used and other pertinent data are listed as appendix D.)

Procedures

Using the tasks as outlined, a preliminary study was conducted to provide training and practice for the researchers. Researchers were video taped and their performance evaluated several times in a group meeting before the researchers worked with the subjects. The six tasks were administered to the subjects with one week intervals between tasks. Present during each session were an interactor, an observer and one subject. The researchers interacted informally with the children before each session, in order to eliminate any

anxiety or shyness on the part of the children. Each session for Tasks 1 and 6 was videotaped while the others were audio recorded only. Ideally, all the tasks should be videotaped but lack of funds precluded the use of video in all sessions.

Data Analysis

All responses for each task were categorized* for statistical evaluation. Frequencies and means were calculated for the categorized responses. Comparisons were drawn between tasks and ages.

Tasks I-III Print Awareness

The first three tasks involving print awareness were administered using similar procedures. The interactor directed the subjects' attention to the pages of a looseleaf binder upon which the items were mounted. Each item was examined separately and dialogue continued until the subjects had no more say about the item. The interview and questioning procedures for these tasks are part of Appendix D.

Findings for Tasks I, II and III

Task I: 37.4% of the responses for all subjects to the items were considered appropriate to the print. See Table 1. These responses included exact identification of the print, similar names like "Coke" for "Coca-Cola," partial identification of the print such as "Campbell's Soup" for "Campbell's Tomato Soup," and misarticulation of the correct name such as "Frucky Fried Chicken" for "Kentucky Fried Chicken." An additional 26.8% of the responses consisted of generic for specific terms such as "soap" for "Ivory." No specific for generic response was ever given. 13.6% of the responses referred to non-print information, for example, the color of design, 3.5% of the responses made

*See appendices for categorizations of responses for tasks I-VI.

reference to the function of print, like "brush your teeth" for "Crest". Only 2.5% of the responses made reference to letters, sounds or other print-related information. For example, one child said that the items were "names" and another that "it looks like numbers". Only one response could be considered unrelated to the item. This response was "For gas--put the gas in the car" for "Milk". Even this response, however, can be explained as a chaining of events involving the purchase of MILK at a convenience store which also pumps gas. Only 3.5% of the responses were avoidance responses.

Table 1

RESPONSES OF ALL SUBJECTS TO TASK I*

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable	Total Potential
Frequency of Responses	7	74	53	13	3	7	6	27	5	1	2	198
Percent of Responses	3.5	37.4	26.8	6.6	1.5	3.5	3.0	13.6	2.5	.5	1.0	

Possible Responses 11 subjects X 18 tasks.

Task II: With less contextual support of the print, appropriate responses drop to 19.7%. See Table 2. Generic for specific responses drop to 12.6%. Print related responses and unrelated responses rise to 9.1% and 17.2% respectively. Avoidance responses make up 25.3% of the total number as opposed to only 3.5% such responses in Task I.

Table 2

RESPONSES OF ALL SUBJECTS TO TASK II

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable	Total Potential
Frequency of Responses	50	39	25	10	4	2	7	4	18	34	5	198
Percent of Responses	25.3	19.7	12.6	5.1	2.0	1.0	3.5	2.0	9.1	17.2	2.5	

Possible Responses 11 subjects X 18 tasks

Task III: In responding to manuscript representations, appropriate responses fell to only 1.5% of the total (see table 3). But subjects called out letter names or in some way responded to print features of the item in 26.8% of potential responses. Responses which may be considered unrelated to the items and avoidance responses both increased to 11.6% and 17.2% respectively. When a child's responses became a series of avoidance responses Task III was discontinued. So 85 additional potential responses (43%) would most likely have been avoidance responses.

Table 3

RESPONSES OF ALL SUBJECTS TO TASK III*

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Discontinued	Total Potential
Total No. of Responses	34	3	0	0	0	0	0	0	53	23	85	198
Total % of Responses	17.2	1.5	0	0	0	0	0	0	26.8	11.6	42.9	

Possible Responses 11 Subjects X 18 tasks

Note: The total number of responses for Task III is considerably less than for Tasks I and II. The subjects become so bored and distracted with Task III the researchers stopped questioning before all tasks were presented.

Additional observations for Tasks I-III: When subjects were asked to point to where "it says that" they consistently pointed to the print. This occurred even when the responses were inappropriate. It suggests that preschoolers are aware that the print communicates the message, whether or not they know what the print says.

In the first two tasks, the subjects participated as long as 45 minutes, remaining interested and involved in the activity. The behavior of the subjects changed for Task III. During this task, subjects exhibited behavior such as squirming, restlessness and impatience so much so that the task had to be discontinued for several subjects. These preschoolers lost their interest in the task and appeared to have a much shorter attention span when required to respond to seemingly meaningless written symbols. This may have important implications for instruction.

Comparison Between Tasks I, II, and III:

There is a sharp decrease in the percentage of appropriate responses as less and less context is available. See Table 4. Generic for specific responses also decrease, indicating that with less context, subjects are unable to relate the item to its general category. At the same time, letter and number calling, and sounding out tactics increase as children, having lost the meaning without the context, focus on something they do know - the letters. One 4 year old subject exemplifies this change in responses from task I-III:

Item	Task I - Response	Task II - Response	Task III - Response
Stop	"Bus stop"	"Bus" and then names each letter in Stop. "S" "T" "O" "P"	"I don't know" then names each letter, "S" "T" "O" "P"
Kentucky Fried Chicken	"Chuck Fried Chicken"	"toothpaste - "too" "doo"	Spelled each word out calling out letters from left to right
Milk	"Milk"	Spelled out "Milk" from right to left calling out "K" "L" "I" "M", then reversed and spelled it out from left to right	"I don't know, you tell me."
Raisin Bran	"Cereal - Raisin Cereal"	Attempts to sound out the words: e-e-n, e-e-a, o-o-r, b-b-b, e-e-n, e-e-e, o-o-i, and so on	Then spelled out each word.

Table 4

COMPARISON OF TASKS I, II, AND III
FOR ALL SUBJECTS

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable or discontinued	Total Potential
Task I												
No.	7	74	53	13	3	7	6	27	5	1	2	198
%	3.5	37.4	26.8	6.6	1.5	3.5	3.0	13.6	2.5	.5	1.0	
Task II												
No.	50	39	25	10	4	2	7	4	18	34	5	198
%	26.5	19.7	12.6	5.1	2.0	1.0	3.5	2.0	9.1	17.2	2.5	
Task III												
No.	34	3	0	0	0	0	0	0	53	23	85	198
%	17.2	1.5	0	0	0	0	0	0	26.8	11.6	42.9	

Tasks I - III Age Differences

For task I, 4 and 5 year olds gave more appropriate responses (48%, 40% respectively) than did 3 year olds. (See Table 5.) When generic to specific

responses are totaled in with appropriate responses the percentages rise accordingly: 3 year olds 54%, 4 year olds - 67%, 5 year olds - 67%. This suggests a developmental gap between 3 year olds and 4 and 5 year olds as does the fact that 25% of the 3 year old's responses were non-print related while the 4 year and 5 year olds made only 5.6% of such responses. Three year olds probably rely more on the supporting contextual clues to derive meaning than do the older children. Note that all three groups give very few print-related responses. When the full context is available, children ignore specific letters, numbers, etc. and attend, instead, to the meaning of the item.

Table 5

TASK I BY AGE

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable or discontinued	Total Potential
3 yr. Olds												
No.	4	21	18	2	2	1	4	18	2	0	10	72
%	5.6	29.2	25.0	2.8	2.8	1.4	5.6	25.0	2.8	0	13.9	
4 yr. Olds												
No.	3	26	10	5	0	1	2	3	0	0	4	54
%	5.6	48.2	18.5	9.3	0	1.8	3.7	5.6	0	0	7.4	
5 yr. Olds												
No.	7	29	19	4	1	4	0	4	3	1	0	72
%	9.72	40.3	26.4	5.6	1.4	5.6	0	5.6	4.2	1.4	0	

The following examples show representative differences in responses of the 3, 4 and 5 year olds to some items in Task I.

Item	3 year old	4 year old	5 year old
Soup	tomato juice thing	Campbellized soup	At the store - 'soup'
Milk	just a little blue thing	milk	milk
Crest	looks like numbers	Crest	toothpaste
MacDonald's	just a frenen fry thing	MacDonalds	MacDonalds
Baby Powder	a bag	Baby powder - Baby alive has that	Powder--Baby Powder
Stop	"red + has letters on it"	stop	"Simon says stop"
Ivory	that's a soap bag	deodorant soap	soap
Rice K.	they say different little people	Rice Krispies	cereal

For Task II, appropriate responses were again greater for the four and five year olds than for the three year olds. See Table 6. All three groups tend to make more print-related responses (such as naming letters or saying "that's a word"), as a result of the reduced context. Examples of such responses are:

Item	Response	Age
Kentucky Fried Chicken	"K-I-E, KATIE"	3 year old
Crest	"C-r-r-e-e-e-s-s-s-t-t-t"	4 year old
Raisin Bran	"N-A-R-B-, N-C-S-A-I-N + Raisin"	4 year old
Lego	"eeen-eeee-jjj-ooo"	4 year old

Table 6

TASK II BY AGE

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable or discontinued	Total Potential
3 year Olds												
No.	38	4	6	4	1	0	1	1	3	14	0	72
%	53	6	8	6	1	0	1	1	4	19	0	
4 year Olds												
No.	4	17	5	2	1	1	5	0	9	9	1	54
%	7.4	31.4	9.2	3.7	1.8	1.8	9.2	0	16.6	16.6	1.8	
5 year Olds												
No.	8	18	14	4	2	1	1	3	6	11	4	72
%	11.2	25.0	19.4	5.6	2.8	1.4	1.4	4.2	8.3	15.3	5.6	

In Task II the five year olds gave more generic for specific responses such as "cereal" for Rice Krispies and "gas station" for Standard (19.4%) than the three year olds (8%) and four year olds (9.2%). The avoidance responses of three year olds were dramatically more frequent (53%) than those for the four year olds (7.4%) or five year olds (11.2%).

For Task III there are too few appropriate responses to note any differences between age groups. See Table 7. Five year olds produce a far greater number of print related responses (59.7%) than the four year olds (13%) or three year olds (4.7%). In this task there are no cues other than the words themselves, and while few children of any age in the study respond exactly or appropriately, the five year olds more frequently name or count the letters rather than attempt a reading of the print.

Examples of such responses are as follows:

Item	Response	Age
MILK	"Mine - M, I, A, A that's a K"	5 years old
STOP	"Circle, S, A, D"	5 years old
COCA COLA	"It's a 1, 2, 3, 4, 5, 6, 7, 8, 9. 10"	5 years old
RICE KRISPIES	"I got a name like that, an r"	5 years old

As in Task II, the three year olds had the greatest frequency of avoidance responses (30.6%) as compared to four year olds (18.5%) or five year olds (8.3%).

The following is an excerpt of the dialogue between the researcher and one three year old who responds in this manner to task III.

Table 7

TASK III BY AGE

	Avoidance	Appropriate	Generic-Specific	Parallel	Related Concept	Function	Chaining	Non-Print Related	Print Related	Unrelated	Uncodable or discontinued	Total Potential
3 Year Olds												
No.	22	2	0	0	0	0	0	0	3	9	36	72
%	30.6	2.8	0	0	0	0	0	0	4.17	12.5	50.0	
4 Year Olds												
No.	10	1	0	0	0	0	0	0	7	10	26	54
%	18.5	1.8	0	0	0	0	0	0	13.0	18.5	48.2	
5 Year Olds												
No.	6	0	0	0	0	0	0	0	43	4	19	72
%	8.3	0	0	0	0	0	0	0	59.7	5.6	26.4	

MILK

R: Katie? What does this one say?

S: That one has ....this one has the same.

R: Right. Do you know what we call those? What do we call those?

S: I don't know.

R: Do you know the name for that? What does this say?

S: I don't know.

LEGO

R: Ok. What does this one say?

S: I don't know

R: Ok.

PHONE

S: I know that one.

R: What's that one?

S: That means school.

R: Where have you seen that one before? Katie, where have you seen that one before? Ok. How about that one?

SCHOOL

S: That's school

R: School, too. All these words say school? Where have you seen this before, Katie?

S: At Mary Kelly's.

R: At Mary Kelly's. And what is this?

S: I don't know.

R: You don't know - Ok, we've just got one more here to do. This is the last one. Let's really try on this one. What is this one?

KENTUCKY FRIED CHICKEN

S: That's the babysitters.

R: At the babysitter's. What is it?

S: I don't know.

R: What do we do with it? Do you know what that says?

S: It says babysitter's.

R: Where does it say babysitter's? Ok. Thank you very much.

Summary of Major Findings for Tasks I - III

1. The more context supporting the print, the greater frequency of appropriate responses.

2. Letter calling and unrelated responses increase when less contextual support is provided, particularly for four and five year olds.

3. "I don't know" and avoidance responses also increase when less contextual support is provided.

4. Whether or not responses are appropriate or exact, all subjects indicate, by pointing, an awareness that the print and not the supporting context, communicates the message or "says that."

5. The older the child, the greater frequency of appropriate responses on all tasks. Four and five year olds respond similarly, while the three year olds have far fewer exact or appropriate responses.

6. When non-print information is present, the four and five year olds refer to it much less frequently than do the three year olds.

7. When no supporting context is provided, five year olds make more print related responses (letter naming and counting) than do the three year olds and four year olds.

8. In general, there seems to be a greater difference in print awareness between three year olds and the four and five year olds, than between the four year olds and five year olds.

9. When print is presented without any supporting context, the children's behavior shifts noticeably to restlessness, impatience, silliness and what closely resembles "hyperactive" behavior. Interest span becomes notably shorter.

10. Four and five year olds respond to more items than three year olds. They are able to find a way to deal with the tasks.

Task IV - Concepts of Reading

The fourth task was an individual interview with the child to gain information about how the child would respond to questions about reading with no written material in sight. (See Appendix D for specific quesitons)

Five subjects said that they like to read, while only four said they knew how to read. Four children also said that either teachers or parents would have to help them learn to read, that they couldn't learn to read by themselves. Six subjects reported that learning to read is hard. Examples of these responses are as follows:

(3 year old)

R: Ummm, what do you like to read?

S: I can't read.

R: You can't read. Do you want to be able to read?

S: When I get bigger.

R: When you get bigger. How much bigger do you have to get?
How old are you going to be when you can read?

S: I don't ... 4.

R: Four, and how old are you now?

S: Three.

R: Oh - Does someone have to help you learn how to read?

S: No, Mommy just reads to me.

Two children who said that reading would be easy also reported that they already know how to read. One child declared that reading is easy when you're older and hard when you're younger.

(5 years old)

R: OK, Do you think learning to read is easy or hard?

S: Easy and it's hard.

R: It's easy and it's hard. Why? What makes it easy to read?

S: When you're big you know how to read.

R: When you're big you know how to read. OK, what makes reading hard?

S: When you're two or three you don't know how to read, or one.

Only two children told us that the people they lived with did not know how to read. These same children were the only ones who said that they were not read to at home. All the children reported that they liked being read to. When asked what they look at while being read to, only two said that they look at the print. Other answers included "the walls" "story," "numbers," "pictures," "nothing," "I listen," "I don't know." Four children maintained that it's possible to read with your eyes closed, and two weren't sure.

When asked whether they accompanied their parents to the grocery store all but one child answered affirmatively. However, despite the awareness of environmental print as shown by the children's responses to the print awareness tasks only two children reported that there was something to read at the grocery store. Of these two children, one said that Mom reads the food, the other said that she reads True books and comics. The majority of responses to this question coupled with the children's reports that they do not know how to read suggests that while these children have begun to read, they are not necessarily consciously aware of their achievement, nor do they have a well developed notion of what reading is which they can articulate. Perhaps no one believes that what the child is doing as shown in the print awareness tasks is reading. Adults don't talk about it so children may not know that what they are capable of doing - using contexually embedded print to construct meaning - is called reading or is of any value.

Four children said that people read because they like to or want to, one said people read because they're taught, and all others answered, "I don't know."

Summary of Task IV

It seems that the majority of these children have already developed the notion that they don't know how to read, that reading will be hard to learn, and that somebody will have to teach them how. They seem unaware of their own knowledge of environmental print. They also seem unable to state a clear understanding of the purpose of reading. There were no outstanding differences between age groups for this task.

Task V: Concepts of Writing

This task was also an interview task but the focus was on writing. In addition the children were asked to write. (See Appendix D) A variety of paper and writing implements were available. Most children when asked to write, chose unlined, colored paper and a variety of markers. Three children produced undifferentiated scribble and one drew a picture. All others produced either words, letters or their own names. When the children were asked to read what they had written, two of the scribblers reported that they hadn't written anything, seven children read or pretended to read what they had written, and two children did not respond.

Most of the children used terms such as "letter," "word," "name," "number" to describe what they had written. However, five children used the terms inappropriately on five occasions. When asked to write a letter, six children did produce a letter of the alphabet, one made an unrecognizable symbol, one wrote a number and another scribbled.

When asked if they wrote, most children answered affirmatively. They reported that they wrote books, letters, names, pictures and "all kinds of things." When asked why they thought people wrote, answers included, "they want to or like to," "to make food lists," "for homework," "to write letters or notes," and "I don't know." Responses indicate that these children are

more willing and able to make overt statements about the function of writing than of reading.

When the subjects were asked to draw, ten of the children either drew or scribbled, and one child wrote letters. When they were asked which of their productions were writing and which were drawing or if writing and drawing were the same or different, five children correctly identified the drawing and the writing or indicated that writing and drawing were different. One child said "you use a pencil for writing and a crayon for drawing." Another child told us that drawing and writing were both the same and different, because "writing has circles and triangles but they both can go up and down." All of the subjects could either write their own name or identify it when it was written for them.

Age Differences for Task V

Several differences emerged between age groups for this task. When asked to write the only children who scribbled were three year olds. None of the three year olds produced any letters, words or symbols. When asked to read what they wrote, the three year olds were those who either did not respond, said there was nothing to read or pretended to read scribble. All the four and five year olds read their writing correctly and one "read" some letters of the alphabet. The only child who produced scribble when asked to write letters, was a three year old.

None of the three year olds used terms such as "letter," "word," etc., appropriately when asked to describe what they had written. One four year old and two five year olds used these terms appropriately. Thus there seems to be some growth in the appropriate use of these terms from three year old subjects to the five year olds.

None of the three year olds verbally indicated that they knew the

difference between writing and drawing. Only one three year old was able to correctly identify drawing as opposed to writing. Two of the three four year olds and three of the four five year olds indicated either verbally or by pointing to their own productions that there is a difference between writing and drawing.

Summary of Task V

The younger children produced scribble or pictures when asked to write, while the older children produced words, letters or their own names. The younger children did not use print related terms appropriately, while some of the older children did use several terms appropriately. The three year olds did not indicate that there is a difference between writing and drawing, while five out out of the seven four and five year olds did.

The subjects seemed to have a better understanding of the function of writing than they did reading. At least they could cite specific purposes for writing. In contrast to responses when asked to read, none of the children when asked to write said they did not know how or refused to write, even if what they produced was scribble. Nine of the eleven subjects said that they either wrote at home or at "school," and were able to list for us the things that they wrote. The findings suggest that these preschoolers have more positive attitudes and are better able to verbalize about writing than about reading. These differences seem important. The reasons for such differences need to be considered carefully although more children must reflect such responses before any major conclusions are drawn from these findings.

The children's eager willingness to write indicates that they do not view writing as difficult. Yet, most of them do believe that reading is hard. This may simply reflect the attitudes they have picked up from

the community, parents or older siblings. It is not evident that writing is actually "easier" for them. Hildreth points out that "it is rare to find a child who can express ideas in writing, however simple, who cannot read." (p. 15)

Relationships Between Responses in Tasks IV and V with Tasks I, II, III

A non-statistical comparison was drawn between the responses to Concepts of Reading and Concepts of Writing and responses to the Print Awareness tasks. There does not seem to be a strong relationship between the children's ability to talk about reading and writing and their print awareness. For example, although one of the four children who said they could read in Task IV had the highest number of appropriate responses in Task I, the other three children had either low or moderate appropriate responses in Task I. The two children who reported that they were not read to at home did not give noticeably fewer appropriate responses in Task I than the other children. At the same time, the child who was aware that Mom reads food in the grocery store did not demonstrate the most print awareness in Task I. The relationship in performance on Tasks IV and V (Concepts of Reading and Writing) and on Tasks I-III seems to be a function of age. That is, the three year olds were both less print aware and less sophisticated in their concepts of writing. In all these tasks the four and five year olds' responses are considerably more mature than the three year olds while there is only a slight difference between the four and five year olds.

Task VI: Book Handling Task*

This task (See Appendix D) is adapted from Marie Clay's Concept About Print Test (1979). Its purpose is to see if children have concepts about books, how they are used and the written language in the book.

Nine of the ten children used the term "book" when asked to identify the book on the table. All but one child also reported that people "read" books. When they were asked what was inside the book some of the responses were "people," "a baby," "papers," "pictures," and "story." One child said, "you look at the pictures but read the words." This response and one that referred to "letters" were the only print related answers.

When the subjects were asked to show the front of the book, five children showed us the back cover and five showed us the front. One child explained that the back cover was the front because there were letters on it. All but one child (who consistently used the term "paper") demonstrated in some way that they knew the meaning of the term "page." While a few of the children failed to respond to the researcher's question, "What is this?" (in reference to "page"), they demonstrated their knowledge of this term by later instructing the researcher to "turn the page" as she read to them.

When asked whether they would like to read the book to the interactor, seven of the ten children said "no" or "I can't." One child, however, pretended to read the book by making up a story to fit the pictures, moving from the back of the book to the front of the book. Another child also immediately pretended to read by making up a story to fit the pictures. Still another child simply turned the pages slowly and said that he was reading. These children, although they were not reading, indicated some knowledge of reading-type behavior.

At one point the children were handed a book and asked to show where to begin reading. Only one child pointed to the print. Others turned to a picture on a random page, or on the first page. Even once the book was opened to the first page and the children were asked specifically to point to the exact place on the page where you begin reading, six children responded

first by pointing to the picture. Four children immediately pointed to the print, but only one of these pointed to the first word. All the children who originally pointed to the pictures persisted in pointing to pictures each time they were asked where the researcher should read next. One child seemed to learn about reading in books during the task, and by the end of the story was pointing to the print rather than the pictures. In addition, he began running his finger from left to right under the print, and moved from the top to the bottom lines. A research setting can become a learning environment for a subject. Two children moved their fingers from left to right, and from top to bottom immediately from the beginning of the task.

When the researcher turned the book upside down and asked if it could be read that way, four children first said "yes" but then turned the book right side up. Three children said "no," one said "yes" and didn't change the book's direction, and one said nothing but turned the book around. All the children responded correctly when asked where the top of the book was while it was upside down.

In an attempt to elicit information about their knowledge of print related terminology, the subjects were asked to show the researcher first one and then two letters, and first one and then two words. Seven children showed one letter correctly, and three children pointed to two letters correctly. In response to this request, one child called the letters "typewriter names." Only two children responded correctly when asked to show just one word, and then two words. In this task, four children pointed to several letters of a word. None of the subjects responded correctly when they were asked to show a "capital letter".

Some of the children provided additional information in responding to this part of Task VI. One child who consistently pointed to the pictures

when she was asked where the researcher was reading told us that the print was "names" and that they do not help you read. Another child sounded the letter names as he'd done in the print awareness tasks. He said that he didn't know when he was asked what all those letter names meant.

Next, the researcher attempted to determine the children's knowledge of book titles. Only two children indicated that they knew something about the title, by pointing to it when they were asked where the name of the book was. None of the children, however, seemed to know about "authorship." When the researcher read the name of the author and asked who it was, some of the children reported that it was the name of the little boy in the story.

At the end of the story the children were asked to summarize it. All children were able to do so, though a few needed considerable prompting. All the children's summaries were appropriate and demonstrated a comprehension of the story.

Age Differences for Task VI

The only outstanding difference between age groups for this task was that when they were asked to point to the exact place where we begin reading, all of the three year olds pointed to either the picture or the print in general (not to any one line or word). None of the three year olds referred to print when asked what was inside the book and as a rule, their responses indicated little understanding of the function of print in books. On the other hand, the three year olds were able to point out letters and words in the print. This ability to identify letters and words as such does not necessarily suggest an understanding of the function of print in connected discourse. In other words, they do not know that readers use the print to "read" or "tell" the story.

Relationship Between Task VI and Other Tasks

In general, the more print aware children are, the greater their understanding of book handling. For example, the children who exhibited the most print awareness in Task I pointed to the print and moved their fingers along the print (one in a right to left direction) and from top to bottom in the book handling tasks. The converse, however, is not true. The three children who were least print aware, as demonstrated in Task I, did not have the least amount of book-handling knowledge.

The five year old child who reported in Task IV that she was not read to at home, and that nobody at home knew how to read, was the child with the least understanding of the function of print in books. Interestingly, this same child who also reported that Mom reads the food in the grocery store, did well on the print awareness tasks often responding appropriately as evidenced below.

Item	Response
Raisin Bran	"Raisin Bran Cereal"
Chevrolet	"Chevrolet car"
Johnson's Baby Powder	"Baby powder"

For this child and perhaps others like her, evaluation of reading development based on knowledge of print in books alone is inadequate to gain insights about what children know about print in all environments.

The three children who showed the most maturity on the print awareness and book handling tasks also responded very well to the writing task. As a rule, it seems that the children as a whole had more knowledge of environmental print and writing, than book-handling knowledge or concepts of reading.

Conclusions and Implications

The subjects of this study may not be representative of all pre-schoolers

but neither are these reasons to consider them special or unusual.

Findings of this study suggest that literacy development begins prior to direct, formal instruction. All of the children we studied demonstrated some awareness of environmental print, and knew that the print and not the supporting contextual featrues communicated the message. The same children who responded appropriately to print embedded in a supportive context, tended to respond inappropriately to print stripped of context. Task III, which presents isolated manuscript words printed in black ink or white index cards, elicited letter calling, unrelated responses and "hyperactive-like" behavior. The children tended to respond to the task as if it were meaningless and uninteresting.

Regardless of their degree of print awareness, our subjects had already developed attitudes toward learning to read. For example, several believed that reading will be hard, that they can't learn to read without being taught and that they do not know how to read (despite their actual knowledge of print). In addition, they could not verbalize an understanding of the function of reading.

In contrast, the subjects were willing to write; none said they couldn't write. They had a more developed notion of the function of writing, mentioning specific functions such as shopping lists, letters and notes. Several of the children used print related terminology. The contrast between their sense of function in reading and writing seems to suggest that reading has a very generalized function for them while writing has several very specific ones.

The subjects' knowledge of print in books seems less advanced than their knowledge of environmental print. The majority of subjects did not indicate an understanding that the print rather than the pictures tells the story.

Although demonstrating little knowledge of the function of print in books, they nevertheless indicated a knowledge of the form of print, i.e., pointing to letters, words, etc. One child epitomized this by sounding out all the letters and then reporting that he didn't know what it all meant. They did show a sense of story, however. Two children told a story in response to turning the pages. All listened attentively while the story was being read and all could respond in an approprate way by retelling the story.

Our findings indicate that some children may be aware of and may be responding to print in the environment, and yet have little knowledge of print in books. This was clearly the case for one of our subjects who reported not having been read to at home and yet was aware that Mom reads food at the store. This child believed that none of those she lived with at home knows how to read. For this child, and perhaps others, the ability to read is evidenced by book reading only; thus, they do not think of themselves as readers.

This study suggests that beginning reading and writing is a developmental process. Three year olds showed less maturity on the print awareness tasks, writing task and book-handling knowledge task. The four and five year olds on the other hand looked quite similar, suggesting a leap in development between three and four years of age. The three year olds consistently focused less on print related information than the four and five year olds. The only task for which there was little difference between age groups was Concepts of Reading - Task IV. The concepts and attitudes held by three year olds were similar to those held by the four and five year olds. This suggests that children's attitudes and ideas about reading are formed quite early and remain rather constant till at least five years of age.

There are several implications our findings have for continued research

and for beginning reading and writing programs. Research in written language development can provide significant knowledge about child development in general and specifically how children come to know and understand the written language system. This report raises many more questions than it provides answers. However, it does strongly suggest that children are actively involved in developing their own written language system. They are discovering principles about written language on which to build developing literacy. We must continue to find ways to understand how this happens and what it all means for child development and schooling. In order to develop curriculum for beginners, we must first acknowledge the information about print that children already have when entering school. They know about the form of writing--letters, words--and are aware of and respond to the print that surrounds them on streets, in stores and at home. They have less understanding of print in books. Evaluation of reading development must consider both these avenues of beginning reading, and credit children with what they do know.

Children need to discover the purpose and function of reading -- what it can and cannot do for them. Too much emphasis on isolated components of reading will not clarify children's understanding of the purpose of written language in their world. Our children responded to isolated, non-contextually embedded words with restlessness and frustration. This type of behavior is often an artifact of instruction devoid of meaning and purpose.

Children must be shown the strengths they have as readers. The negative attitudes many children already have about reading must be changed. Believing that they can't read, that reading will be hard, that they can't learn it on their own, will only impede development. Perhaps the teacher's most important task is to present reading as a meaningful, enjoyable,

multi-functional activity and to focus on children's strengths rather than weaknesses in reading.

Young children need more first-hand experiences with books. They need to be read to individually or in small groups where they can observe the reader's handling of the book, and use of the print. Children should be encouraged to follow along as they are read to, and to look at the book themselves later.

Finally, and perhaps most importantly, teachers must become observers of their students' development. No standardized reading readiness test we know of measures children's attitudes and concepts of reading, their knowledge of environmental print, or their experiences with books. Informed teachers are capable of learning more about students from careful observation and interactions than they can from test scores. We must begin to appreciate the strengths and achievements of developing readers and writers and include the basic ingredients of enjoyment, purpose and meaning in our beginning reading curriculum.

In conclusion, more studies are needed to expand and refine our understanding about the impact of a print-laden environment on written language development. Questions that other researchers may wish to address include:

...To what extent do children become aware of print prior to reading instruction?

...Are there discernable sequential steps in the development of literacy?

...What features of written language do children attend to as they develop literacy?

...What function or purpose do children perceive print serves?

...Do children become aware of the alphabetic nature of written English or do they respond to written symbols as if they are pictorial or logographic?

...How do children use print to make sense of the world?

...How do children view print in relation to their already formulated models of oral language?

...Does awareness of print in the environment assure knowledge about book handling and print in books?

...What is the role of the contextual setting in which print is embedded?

...What is the relationship between reading and writing in literacy development prior to instruction?

...What is the relationship between oral language acquisition and the acquisition of literacy?

...Are children consciously aware of their own development of literacy?

...What is the relation between the functional use of reading and writing and children's responses to written language?

...In what different ways do children respond to using terms such as "draw," "write," "read," "letter," etc. in different settings?

Appendix A

Personal Data Sheet

Tester _____

Date _____

Name _____ Sex _____

Address _____

_____

Phone _____

School _____

Any other schooling _____

Teacher's name _____

Age _____

Date of birth _____

Place of birth _____

Adults in Home:

Mother _____

Father _____

Other _____

Siblings _____

number _____

ages _____

Place of birth:

Mother _____

Father _____

Other _____

Siblings _____

_____

Languages Spoken in Home:

Mother _____

Father _____

Other _____

Siblings _____

Occupation:

Mother _____

Father _____

Other _____

Educational Status:

Mother _____

Father _____

Other _____

Comments:

Health of child _____

_____

Social interaction _____

_____

_____

Appendix B

Print Awareness Item List

Task I	Task II	Task III
1. Campbells Tomato Soups	1. Milk	1. Coca Cola
2. Lego	2. Crest	2. Stop
3. Gordon's Milk	3. Kellogg's Raisin Bran	3. Kellogg's Raisin Bran
4. Crest	4. Chicken of the Sea Tuna	4. McDonalds
5. Chicken of the Sea Tuna	5. McDonalds	5. Chicken of the Sea Tuna
6. McDonalds	6. School Bus	6. Ivory Soap
7. Johnson and Johnson Baby Powder	7. Stop	7. Crest
8. School Bus	8. Johnson and Johnson Baby Powder	8. Johnson and Johnson Baby Powder
9. Kellogg's Raisin Bran	9. Coca Cola	9. Standard Oil
10. Stop	10. Chevrolet	10. Kellogg's Rice Krispies
11. Coca Cola	11. Ivory Soap	11. Chevrolet
12. Chevrolet	12. School	12. Campbell's Tomato Soup
13. Ivory Soap	13. Phone	13. School Bus
14. School	14. Kellogg's Rice Krispies	14. Gordon's Milk
15. Phone	15. Kentucky Fried Chicken	15. Lego
16. Kellogg's Rice Krispies	16. Campbell's Tomato Soup	16. Phone
17. Kentucky Fried Chicken	17. Lego	17. School
18. Standard Oil	18. Standard Oil	18. Kentucky Fried Chicken

NEW IMPROVED FLAVOR
Crest
REGULAR FLAVOR
TOOTH PASTE
NET WT. 7 OZ.
Accepted
COUNCIL on DENTAL THERAPEUTICS
AMERICAN DENTAL ASSOCIATION
PRICE MARKED IS
15¢
OFF
THE REGULAR PRICE

Task 3

Crest

Appendix D - 1

PHASE 1: Child's Concepts of Reading and Metalinguistic Awareness

Phase I consists of the following tasks:

The following experience is optional and may be used to gain insight into children's responses to print in the most natural situational context.

Child's Reaction to Print in a Situational Context. The subjects will be presented with actual signs, advertisements, packaged food products, etc. within the environmental setting. The researcher will actually take a child to a supermarket or gas station and ask the child to respond to labels and packages.

Materials: Packaged products, packaged food products, and signs that can be viewed during trip through a market or variety store, a walk around the block, a visit to the gas station, or restaurant, etc.

Task 1: Child's Reaction to Two-Dimensional Print in Context. The subjects will be presented with the print in a context one step removed from the situational context. The children will be shown, for example, a cut-out portion of a cereal box which has been pasted onto a flat surface rather than retaining the shape of the original.

Materials: Packaged products, packaged food products, and signs that have been coded, cut out, and put on tagboard or hardbacking and laminated.

Task 2: Child's Reaction to Print Which are in Familiar Graphic Units. The subjects will be presented with representations of familiar graphic units from newspapers or photographs without familiar accompanying color or texture of material. (Examples: Crest, Coca-Cola or McDonald's in its usual script but presented away from its most familiar print setting.)

Materials: Trademarks and logos such as Coca-Cola, Super Sugar Crisps, Burger King and so on that have been coded, cut out, put on tagboard or hardbacking and laminated.

Task 3: Child's Reaction to Graphic Units in Standard Printed Forms. Language units presented in tasks 1 and 2 will be presented in standard writing.

Materials: Same items used in tasks 1 and 2 written in manuscript form, Task 3 should include the entire written message rather than part of it.

General Introductory and Questioning Procedures:

The introduction and questioning procedures used by the researcher for the first four tasks will be:

INTRODUCTION

1. Develop rapport with child
2. "I want you to help me with something. I have some cards and I'd like you to tell me about them," or "I'm going to ask you some questions."

Appendix D - 2

QUESTIONING, EXPANDING, AND EXPLORING

1. Initial Questioning

SAMPLE QUESTIONS	PURPOSES
a. Have you ever seen this before? b. Where?	To determine if the child has had previous contact with the printed stimuli
c. What do you think that is? d. What do you think that says?	To determine the child's response to the printed stimuli
e. How do you know? f. Why did you say that? g. What makes you think so?	To determine why the child responded the way he/she did
h. What tells you that it says? i. Show me with your finger where it says	To determine what stimuli the child is responding to

2. Expanding and Exploratory Questioning

SAMPLE QUESTIONS	PURPOSES
a. What else does this say? b. How do you know? c. What can you tell me about this? d. Show me with your finger what you are looking at.	To determine as thoroughly as possible what stimuli the children are reacting to

SUMMARY

Show me where it says.....

Techniques to employ:

1. Ask open-ended questions about printed stimuli in a situational context. Vary your language to see if different questions produce different responses.

Appendix D - 3

2. Be careful to ask all questions for each item. Make sure that subject points to item by saying, "Show me with your finger where it says"

3. Try not to provide subject with information. For example, "Do you like to eat this?"

4. Randomize order of items for each of Tasks 1-3.

5. Utilize tape recorder to record questions as well as the child's verbal response. Try not to let recorder interfere with the interaction between you and the child. Interactor could repeat child's response loudly if child's response is too low for recording.

6. Interactor should not be writing down responses. On the response sheet, observer should note all nonverbal responses and describe how material was presented.

Some don'ts:

1. Avoid asking yes/no questions such as "Can you...?" or "Do you know...?"

2. Do not be specific in your questioning. Ask general questions which might elicit language from the child.

3. Don't stop at "I don't know." Follow up with other questions.

4. Don't wear out the same question. Develop the art of rephrasing and paraphrasing.

5. Don't refer to the stimulus as a "picture". Words like "it" or "this" or "card" are less directive.

Appendix D - 4

Print Awareness Items

These items were carefully and systematically selected from popular children's television shows, and from business and street signs in the local area. Item selection should reflect the local environment and time period.

Campbells Tomato Soup

Lego

Gordons Milk

Crest Toothpaste

Chicken of the Sea Tuna

McDonalds

Johnson and Johnson Baby Powder

School Bus

Kellogg's Raisin Bran

Stop

Coca Cola

Chevrolet

Ivory Soap

School

Phone

Kellogg's Rice Krispies

Kentucky Fried Chicken

Standard Oil

Gerber's Baby Food

Carnation Milk

Western Valley Pinto Beans

PHASE II: Child's Concepts of Written Language and Metalinguistic Awareness

Task 4 : Child's Concepts of Reading

Each subject will be interviewed to determine their concepts about and attitudes toward reading. This task will aid in understanding the perceptions young children have about the function of reading and the reading act itself. Interviewers will encourage as much discussion as possible in response to these questions.

NAME of child:_____ Date:_____

AGE of child (years & months):_____ Sex:_____

NAME of interviewer:_____

(Please use cassette tape recorder for interviewer if possible. Observer should record responses, not interactor.)

1. Do you know how to read?_____
(If "yes" on #1 ask:)
   a. How did you learn how to read?_____
   b. Did somebody help you to learn? (if yes, who?) or did you learn by yourself?
   c. Do you like to read?_____
   d. What do you like to read?_____

(If "no" on #1 ask:)
   e. Do you want to be able to read?_____
   f. How will you learn to read?_____
   g. Does someone have to help you learn how to read?_____
   h. Who do you think will help you learn how to read?_____

2. Is it possible to learn to read by yourself?_____

3. Is learning to read easy/hard?_____

_____

4. Why do you think learning to read is easy/hard?_____

_____

_____

5. a. Do the people you live with know how to read?_____

_____

b. What do they read?_____

_____

c. Where do they read? (kitchen, living room, etc.)_____

_____

6. a. Do they ever read to you?_____

_____

b. Who?_____

_____

c. What do they read?_____

_____

d. Do you like it?_____

_____

e. Why?_____

_____

7. What do you look at while you are being read to? (Probe with "Anything else?")_____

_____

_____

8. a. If I said "I'm going to read you a story", what would I do?_____

_____

b. If I said "I'm going to tell you a story", what would I do?_____

_____

c. Are reading a story and telling a story the same or are they different?_____

_____

d. How?_____

_____

_____

9. a. Can you read with your eyes closed?_____

_____

b. How?_____

_____

10. a. Do you have a T.V.?_____

_____

b. Is there anything to read on T.V.?_____

_____

(Try to get at books, magazines and newspapers, and labels without using those words. If not, ask directly about them.)

11. a. Do you ever go to the store with your parents?_____

_____

b. If yes, is there anything in the store that you read or people can read?_____

_____

c. What?_____

_____

12. Why do people read?_____

_____

_____

13. Do you speak a language?_____

_____

14. What do you speak?_____

_____

_____

Task 5: Child's Concepts of Written Language and Pictorial Representation

This task will provide information regarding young children's concepts about writing as well as their use and understanding of print-oriented terminology. Subjects will also be required to write and draw and then react to their productions. The subjects will have available to them a variety of writing and drawing materials such as colored and white paper, lined and unlined paper, crayons, pencils, marking pens, etc. The degree to which the child's choice of materials varies according to the task will be noted.

Procedure:

1. Offer materials to subject and explain what they are.
2. Ask the child to respond to the questions on the Task 5 questionnaire.
3. In order to identify the response with the appropriate question, mark each written response of the child with the appropriate question number. Also if the child reads what is written, record what the child claims it says on sample.
4. Record verbal responses on tape recorder. Try not to let the recorder interfere with the interaction between you and the child. Observer must record all nonverbal behavior.

NAME of child:_____ Date:_____

AGE of child (years & months):_____ Sex:_____

NAME of interviewer:_____

(Have available lined paper, unlined paper, pencil, pen, magic marker and crayon in front of child.)

1. a. Write for me. (If no response, say "Pretend to write for me.")_____

b. Why did you choose those? (paper and writing implements)_____

2. a. Read me what you wrote._____

b. If child says "I can't" ask "Why not?" and then say "Pretend to read."_____

3. Tell me what you wrote. What's this and this? (Get at terms word, letter, etc.)_____

4. Write me a letter._____

5. a. What do you write at home?_____

   b. Do you write at school?_____

   c. What do you write at school?_____

6. What do you write?_____

7. Why do people write?_____

8. (Offer materials again)
   a. Draw me a picture

   b. Why did you choose those?_____

9. a. Show me your writing._____

   b. Show me your drawing._____

10. (Make sure child has samples of both his writing and drawing in front of him.)

    a. Is drawing the same as writing?_____

    b. How are they similar?_____

    c. How are they different?_____

11. Show child a variety of writing samples (manuscript, cursive, words written in language other than English, a single letter, reoccuring letters, and non-writing samples such as simple drawings and geometric shapes). Ask child to identify which of the samples represent writing._____

12. Write three different looking names including the child's and ask him to read his name and point to it._____

PHASE III: Metalinguistic Awareness

Task 6: Book Handling Knowledge Task

Subjects will be presented with a book and asked to read for the researcher. If the child cannot read or refuses to read, the book will be read for the child by the researcher. During the reading, the Book Handling Knowledge Task will be administered. Developed by Y. Goodman and B. Altwerger, it is an adaptation of the work of M. Clay (1972) and D. Doake. This focuses on directionality, use or understanding of terminology such as page, letter, word, and concepts regarding the source of the language.

Procedures:

1. Take a picture storybook that is suitable for reading to a pre-school child.
2. Make sure that the book has a title page which includes the title of the book and the author's name.
3. Make sure that the pages have clear, bold print and that there are many pictures in the book. If possible, there should be a page with print on one side and picture on the other.
4. If you are right-handed, sit with the child on your left side, and vice versa if you are left-handed.
5. Interactor should try to eliminate teacher role influences. Try not to give child too much information or direction toward print.
6. If the child has trouble with the "curtain," use a pointer (pencil, pen, etc.) instead.

NAME of child:_____ Date:_____

AGE of child (years & months):_____ Sex:_____

NAME of interviewer:_____

Item		Administration	Instruction	Response	Child's Response
1		Show book; title covered by hand. Flip over pages	"What's this called?" "What's this thing?" If child answers with the name of the book, record and ask "What's (say name of book given by child)	"Book" "Story Book" "Story" Name of book	
2		Displaying book.	"What do you do with it?"	"Read it" "Look at it" "Tell it" "Open it"	
3		Displaying book.	"What's inside it?"	"Story" "Picture" "words" "pages" "letters" "things".	
4		Present book wrong way up and back towards S.	"Show me the front of this book" "Take the book and open it so that we can read it together	Any indication of front or first page.	

Item		Administration	Instructions	Response	Child's Response
5		Turn to page 3	Hold on to a page and say "Show me a page in this book". "Is this a page?"	Point to page "Yes"	
6		Give the book to child.	Read this to me.	Record all responses	
7		If child doesn't read the book or does inappropriate book reading continue: Give the book to the child. Read the first page.	"I'm going to read you this story. You show me where to start reading." "Where do I begin?"	Indicates print on first page.	
8		Turn to next page.	"Show me the top of this page". "Show me the bottom of this page".	Indicates top edge or toward top. Indicates bottom of page or towards bottom.1	

Item		Administration	Instructions	Response	Child's Response
9		Show the page to the child.	"Show me with your finger exactly where I have to begin reading".	Points to the first word on the page.	
10		Show the page to the child	"Show me with your finger which way I go, as I read this page".	Left to right, on the page.	
11		Continue to show the page to the child.	"Where then?" (This may already have been done or stated in #9, if so credit but do not repeat.)	Top line to bottom line.	
12		Read the page.	"You point to the story while I read it." (Read slowly)	Exact matching of spoken word with written word. Close matching.	

Y. Goodman

Item		Administration	Instructions	Response	Child's Response
13		If there is print on both pages display the pages.	"Where do I go now?"	Points to the first line of print on the next page.	
14		Read the next two pages. If possible turn to a page with print and a picture on it. Turn the book upside down without the child seeing you.	Can you or I read this now? Why or why not.		
15		Show S how to use masking card to close the "curtains" over the "window". (Use two pieces of black cardboard).	"Let's put some of the story in this window. I want you to close the curtains like this until I can see <u>just one letter</u>." "Now just <u>two</u> letters".	One letter correct Two letters correct	
16		Open "curtains"	"Now close it until we can see just one word." "Now just two words."	1 word correct 2 words correct	

Item		Administration	Instructions	Response	Child's Response
17		Open "curtains"	"Show me the first letter in a word - any word."	First correct Last correct	
18		Remove card	"Show me a capital letter - any capital letter."	Points clearly to a capital letter. Points to any capital letter.	
19		Read to end of story. Close book and pass it to the child.	"Show me the name of the book" or "Name of story?"	Cover, fly-leaf or title page.	
20		Get at comprehension	"Tell me something about the story."		

Item		Administration	Instructions	Response	Child's Response
21		Leave the book with the child.	"Show me the beginning of the story." "Show me the end of the story.	Opens book to first page and points to the first line. Turns to last page and points to the last line.	
22		Title page pointing	"It says here (Read title of the book) by ...(Read the author's name). What does by ...(say author's name) mean?"	"He wrote it." "He made up the story." "He made the book."	

Bibliography

Betts, Emmett A. The Prevention and Correction of Reading Difficulties. Evanston, ILL.: Row, Peterson and Co., 1936.

Bennett, Kelly Randolph. Performal Learning Patterns in Young Children as Signaled by Early Reading Responses. Dissertation, UCLA, 1971.

Bissex, Glenda L. Gnys at Work: A Child Learns to Write and Read. Harvard University Press. Cambridge, Mass.: 1980.

Chomsky, Carol. "How Sister Got Into the Grog." Early Years. November, 1975.

"Write First, Read Later." Childhood Education, March, 1971, pp. 290-295.

Clay, Marie. Reading: The Patterning of Complex Behavior. New Zealand: Heinemann Educational Books, 1979.

Sand Test. New Zealand: Heinemann Educational Books, 1972.

What Did I Write? New Zealand: Heinemann Educational Books, 1975.

Delacato, Carol. Treatment and Prevention of Reading Problems. Springfield, Illinois: Charles C. Thomas, 1959.

Downing, John. "Children's Developing Concepts of Spoken and Written Language. Journal of Reading Behavior. Winter, 1971-72, pp. 1-19.

"The Development of Linguistic Concepts in Children's Thinking." Research in the Teaching of English. Spring, 1970, pp. 5-19.

Durkin, Dolores. Children Who Read Early. New York: Teachers College Press, 1966.

Gibson, Eleanor and Harry Levin. The Psychology of Reading. Cambridge, Mass.: The M.I.T. Press, 1976.

Haussler, Myna. A Young Child Interacting With Written Language in a Print-Oriented Society. Unpublished Masters Thesis, University of Arizona, 1977.

Havighurst, R. J. Human Development and Education. Longmans, N.Y., 1953.

Heffernan, Helen. "Significance of Kindergarten Education." Childhood Education, XXXVI, March/60, pp. 313-19.

Hildreth, Gertrude. "Developmental Sequences in Name Writing." Child Development, Vol. 7, 1936, pp. 291-303.

"Early Writing as an Aid to Reading." Elementary English, Vol. 40, January 1963, pp. 15-20.

Jones, Mary H. and Norejane J. Henderickson. "Recognition by Preschool Children of Advertised Products and Bookcovers." Journal of Home Economics, V. 62, No. 4, April, 1970, pp. 263-267.

Krippner, S. "The Boy Who Read at Eighteen Months." Exceptional Child, 1963, Vol. 30, pp. 105-109.

Legrun, Alois. Wie und was „schreiben" Kindergarenzoglinge? Leitschrift fur Padagogische Psychlogie V. 33 pp. 322-331.

Read, Charles. "Pre-School Children's Knowledge of English Phonology." Harvard Educational Review, Vol. 41, No. 1, February, 1971, pp. 1-34.

Children's Categorization of Speech Sounds in English. NCTE Research Report No. 17, 1975.

Reger, Roger. "The Child Who Could Read Before He Could Talk." Journal of School Psychology, 1966, 4:2, pp. 50-55.

Reid, Jesse F. "Learning to Think About Reading." Educational Research, 9, 1, pp. 56-62.

Soderbergh, Ragnhild. Reading in Early Childhood: A Linguistic Study of a Preschool Childs Gradual Acquisition of Reading Ability, Washington, D.C.: Georgetwon University Press, 1977.

Torrey, Jane W. "Learning to Read Without a Teacher: A Case Study." Elementary English, 46:5, May 1969, pp. 550-556, 658.

Ylisto, Ingrid. "Early Reading Responses of Young Finnish Children." The Reading Teacher. November, 1977, pp. 167-172.

WRITTEN LANGUAGE-NATURALISTIC STUDIES
Annotations by Lois Bird

The following annotated bibliography consists, for the most part, of naturalistic research of developing literacy in young children. The researchers in these studies do not control the experimental settings; rather they focus on the child's spontaneous response to whole language.

I. Productive Writing

Ames and Ilg, "Developmental Trends in Writing Behavior," Journal of Genetic Psychology, Vol. 79, 1951, pp. 29-46.

Analyzing the spontaneous writing behavior of fifty children ages three to six, Ames and Ilg describe in detail the age changes which generally occur in the printing and writing of letters, words, names and numbers. They conclude that there is a well-defined developmental sequence in the writing behavior of the maturing child, that teachers would do well to respect in the classroom.

Bissex, Glenda. Gnys at Work: A Child Learns to Write and Read. Harvard University Press, Cambridge, Mass., 1980.

We are treated to the unique front row seat Bissex knew as parent-researcher, as she shares with us the literacy development of her son, Paul. Over a five-year-period she traces the patterns of Paul's development from his use of letters to represent feelings separate from words or sounds to his sophisticated understanding of written language as communication bound to and shaped by audience. As Bissex shares her observations of Paul's growth as a reader and writer, we gain valuable insight into how literacy may develop in all children.

Chomsky, Carol. "How Sister Got Into the Grog," Early Years, November 1975.

Not only do we find out "how sister got into the grog," (translated: garage) but also, how a class of first graders got into reading--through writing. Chomsky describes the class where children are encouraged to write about everything using their own invented spelling system. She maintains that written language is systematic and assessible from the start when children are allowed to take an active role in dealing with it.

Clay, Marie. What Did I Write? Auckland, New Zealand: Heinemann Educational Books, 1975.

Marie Clay successfully answers the question posed in the title of her book, and others as well, as she explores the developmental features of childrens' earliest attempts at writing. She organizes the writing samples around thirteen principles that teachers may use to evaluate their students' written work. Clay stresses, however, that the key to helping children lies in understanding how they are developing as they go about discovering the written language system for themselves. Teachers can best discern this process of discovery in samples of their students own writing. Clay concludes with a discussion of the interrelationship between reading and writing, listing concepts needed for reading that may best be acquired through writing.

Hildreth, Gertrude. "Sucess of Young Children in Number and Letter Construction," Child Development, Vol. 3, 1932, pp. 1-14.

Learning to write is a developmental process. Hildreth observed three to six-year-old childrens' attempts to write their names, and discovered a clear developmental sequence, ranging from aimless scribbling (age 3 to 3.6) to separate symbol units (age 4 to 4.5) to eventually, recognizable letters and correct spelling (age 6 on). In all, Hildreth isolates eight developmental stages. In conclusion, she suggests that the writing ability of young children may provide valuable insight into their mental maturity. Furthermore, she recommends that classroom teachers consider this developmental process when planning formal writing instruction.

Hildreth, Gertrude. "Reversals in Reading & Writing" the Journal of Eduational Psychology, Vol XXV, Jan 1934.

This is an experimental study on reversals in reading and writing involving about two hundred second, third, and fourth graders from a public, private and Hebrew school. Two sets of reading and writing tests were administered and in all cases, the tendency towards reversals declined with increasing age and maturity. Furthermore, the items most frequently reversed were those on which children generally receive little practice, those with which they have little experience, or those that are less distinguishable than others.

King, Martha L. & Victor Rentel. Toward a Theory of Early Writing Development. The Ohio State University, Columbus, OH.

In the search for answers to the question, "How do children learn to write," King and Rentel lead us through a descriptive analysis of the current writing research of Marie Clay, James Britton, Arthur Appleby, M.A.K. Halliday and others. Although they do not reach definitive answers, they do define patterns of study that may serve to guide future inquiries. These patterns embrace such subjects as the developmental interplay between talk and writing, beginning with children's spontaneous unprompted speech; retelling stories on the basis of an internalized story structure; and controlling audience, context, and function of communication. The development of writing is viewed as a natural extension of the need and desire to communicate and the competence of children as language users to discover the conventions of writing is highlighted.

Legrun - "How & What Do Preschoolers Write?" Leitschrift fur Padagogische Psychlogie V. 33 pp. 322-331.

For those inclined to believe that preschoolers can't write, Legrun's 1932 study brings to light some exciting data that strongly suggests otherwise. His analysis of the writing samples collected from fifty children, two-to-six years old, results in a five-stage developmental progression ranging from "disorderly scribbing" to an orderly representation of letters and numbers. Legrun also investigates mirror writing, which seems to disappear with increasing age and experience. In addition, he takes a look at all-capital writing as opposed to manuscript or cursive. His thought-provoking conclusion is two-fold: 1) the process of writing begins long before first grade; 2) there appears to be a somewhat uniform pattern of writing development.

II. Spelling

Beers, James W. and Edmund H. Henderson. "A Study of Developing Orthographic Concepts Among First Graders," Research in the Teaching of English, Vol. 11, Vol 2, Fall 1977, pp 133-148.

This study based on error analysis and the longitudinal observation of twenty-five first grade students, suggests that children progress through stages of spelling acquisition. Judging from the consistent spelling patterns that emerged, Beers and Henderson believe that children construct a hierarchy of spelling strategies. Children rely, initially, on an awareness of speech sounds as determined by articulatory features. Gradually, as their familiarity with the structure of written language increases, they begin to consider morphophonemic and syntactic elements as well. Children seem to be employing increasingly sophisticated strategies and internalizing many types of information as they learn the English orthographic system.

Chomsky, Carol. "Reading Writing and Phonology," in Psycholinguistics and Reading, Frank Smith (ed) Chicago: Holt, Rinehart and Winston, Inc., 1973, and DeStefano and Fox, Language and the Language Arts.

Many of us would gladly do away with the English orthography, believing that any system in which the sounds of words cannot be predicted from their spelling, is cruelly inconsistent and therefore, guilty of causing a wide array of reading problems. Drawing from the work of linguists Noam Chomsky and Morris Halle, Carol Chomsky explains that while English spelling is frequently not phonetic, it does nevertheless, closely "correspond to a level of representation within the phonological system of the language which is deeper than the phonetic level." This positive view of English orthography has important implications for reading.

Goodman, Yetta and Kenneth, "Spelling Ability of a Self-Taught Reader," Elementary School Journal, December 1963, pp. 149-154.

The sage advice "What's good for one is good for all" is not so sage when it comes to helping children become literate. Presenting Kay, a six-year old, self-taught reader, with a series of spelling tasks, the Goodmans gained insight into her self-initiated spelling strategies. Thus they maintain that spelling, like all aspects of literacy, is developmental, and generalized spelling instruction does not fit the needs and abilities of individual students.

Henderson, Edmund, Thomas Estes and Susan Stonecash, "An Exploratory Study of Word Acquisition Among First Graders at Mid-term in a Language Experience Approach," Journal of Reading Behavior, 4, Summer 1972.

Henderson and others' investigative study of beginning readers' word acquisition in a Language Experience Program will compel the respect of even staunch defenders of basal reader programs. Not only did students acquire a sight vocabulary that was comparable to the vocabulary anticipated by the typical basal program in both the type of words learned and in the volume of the vocabulary, but also, a high proportion of the words the students spelled themselves reflected the

order and system of English-spelling. In other words, children were learning words on the basis of their intuitive knowledge about the nature of English langauge rather than simply relying on the limited letter-sound tactics taught in basal programs.

Read, Charles. "Pre-school Children's Knowledge of English Phonology," Harvard Educational Review, February 1971, p. 1-34.

Charles Read is readable indeed in this well-written and fascinating study of pre-schoolers' knowledge of English phonology. "Knowledge" is emphasized throughout the article for it is clear that children are approaching the spelling system not on the basis of fixed habit, but through an intuitive knowledge of the phonetic segments of speech which they analyze in terms of such properties as nasality, syllabicity, backness, height, and affrication. The remarkable consistency and regularity across the invented spellings of the children Read studies suggests that all children initially rely on phonetic analysis to spell. Gradually they move towards an awareness that print corresponds to an abstract, lexical form, rather than a direct representation of sound.

Read, Charles, Children's Categorization of Speech Sounds in English, NCTE Research Report #17, Urbana, IL: National Council of Teachers of English, 1975.

This is a thorough and somewhat technical investigation of the phonetic bases of the invented spellings produced by pre-school and primary grade children. Read discusses experimental techniques for eliciting children's analysis of phonetic relationships, identifies specific characteristics that influence children's categorization of speech sounds, and relates the implications of children's ability to phonetically analyze words to the teaching of reading and writing. It is clear that learning to spell is a developmental process. Well-intentioned but misinformed instruction may obstruct rather than facilitate the process.

Paul, Rhea. "Invented Spelling in Kindergarten," Young Children, March 1976, p. 195-200.

Paul encouraged her kindergarten students to write by allowing them to spell words the way they sound. The result was independent, five-year-old writers who relied on "invented spelling" rather than the teacher, to express themselves in written form. Contrary to the fear that children who spell phonetically will be crippled as conventional spellers, Paul found that her students progressed in their spelling from the most simple representation of words by initial consonants only to the gradual addition of final consonants, and eventually vowels. Finally, as their reading ability grew, they moved into the standard spelling system. Paul demonstrates that spelling, as a developmental process, is clearly reflected in children's invented spelling.

Zutell, Jerry. "Some Psycholinguistic Perspectives on Children's Spelling," Language Arts, Vol. 55, No. 7, October 1978, pp. 844-850.

Drawing upon the recent spelling research of Chomsky, Read, Beers and others, Zutell maintains that young children tackle spelling as competent language users, bringing to the learning process a remarkable ability to analyze sound-letter relationships (an ability that often rivals that of adults), together with an intuitive knowledge of the structural and meaning patterns of English orthography. The instructional implications that Zutell spells out for teachers and parents include eliminating meaningless spelling tests and drills and providing instead, many real opportunities for reading and writing. He also recommends that teachers help students to use a variety of spelling strategies other than limited "sounding-out" tactics.

III. Reading

Appleby - The Concept of Story: Ages Two to Seventeen. University of Chicago Press

"Once upon a time..." represents a language style that young children come to associate with stories and begin to incorporate into their own storytelling. This is just one aspect of "storyness" that develops as children experience the pleasure of hearing stories and sense the artisitic and social value of literature. Different age groups were asked to respond to tasks which included re-telling a story, and explaining which part was most important. Analyzing the data, Appleby traces developmental stages in children's natural responses to stories. He suggests that a program for learning literature and the arts must consider not only the place of literature in our lives, but also, the development of children's response to it.

Chomsky, Carol. "Write First, Read Later." Childhood Education, March, 1971, pp. 290-295.

Chomsky argues that traditional programs which introduce reading first, and writing later (often only as an afterthought) are doing things backwards. She asserts that children should "write first, read later." This approach to beginning reading instruction offers several important advantages. For one, children become active participants in the learning-to-read process. They control the process as they rely on their keen phonetic acuity to analyze words into their component sounds, and then construct the words accordingly. In this way, secondly, children are able to claim the written word as something that belongs to them; something that they themselves have created. Finally, when children read what they have written themselves before tackling someone else's written work, they discover that reading not only makes sense, but that it is easy and pleasant as well.

Clay, Marie. Sand Test, New Zealand: Heinemann Educational Books, 1972.

An evaluative device designed to access the book handling knowledge of young children.

Clay, Marie. Early Detection of Reading Difficulties. Heinemann Educational Books, 1979.

This practical guide to diagnosing reading difficulties, with its intelligent emphasis on teacher observation and individual guidance, is like a refreshing breeze in a reading remediation atmosphere stagnant with standardized tests and meaningless skill-drill materials. Clay, ever-mindful of the complex nature of language, views the development of multiple reading strategies as the key to unlocking problems. Directions for administering the "Sand Test" are included in this sensible handbook written by a researcher who understands language and learning processes and knows children.

Clay, Marie. Reading: The Patterning of Complex Behavior. New Zealand: Heinemann Educational Books, 1979.

Clay traces the patterns of reading behavior through preschool experiences, to initial encounters with print in the classroom, and finally, through the reading process itself. Emphasizing the communicative nature of reading, she maintains that knowledge about oral language is the starting point for all beginning readers. As they attend to print, other behaviors develop, namely, following the left-to-right directionality of print, learning how to handle books, matching the flow of speech to segments of print, self-correction in reading, and decoding abilities. This practical guide to beginning reading will be valued by classroom teachers for its clear overview of the reading process as well as its sound suggestions for implementing an instructional program.

Doake, David B. Book Experience and Emergent Reading in Preschool Children. Vols. I and II. Department of Elementary Education, University of Alberta, in progress.

Doake challenges the notion of reading readiness, insisting that reading begins from the time children hear language and more specifically, hear nursery rhymes, songs and stories. He maintains that when youngsters are immersed in functional written language and allowed to use their well-developed language learning strategies to direct and monitor their own reading progress, they can learn to read in much the same, natural way they learn to speak. The article includes several charming and revealing transcripts of pre-school children involved in the reading process.

Downing, John. "Childre Developing Concepts of Spoken and Written Language." Journal of Reading Behavior. Winter, 1971-72, pp. 1-19.

In this replication of the original Reid study, Downing interviews twelve four and five-year old children about their understanding of spoken and written language. Based on their ability to discriminate between words and sounds, he divides the subjects into three groups: 1) rapid developers, 2) intermediate developers, 3) slow developers. The rapid

developers are most adept at talking about written and spoken language. They understand the communicative purpose of written language, grasp the symbolic function of writing, demonstrate command of technical terminology, and are able to explain the decoding process. Downing concludes that the development of literacy in children is best revealed by their degree of understanding of the reading process. Children who show a lack of understanding are "cognitively confused", and subsequently, have reading problems. Children who demonstrate "cognitive clarity," on the other hand, are successful readers.

Downing, John and Peter Oliver. "The Child's Conception of a Word," Reading Research Quarterly, No. 4, 1973, pp. 568-582.

"Look at the beginning word in the first sentence, boys and girls." However customary this sort of direction may be in beginning reading instruction, Downing warns that young children may not know what is meant by "word" or "sentence." Presenting preschool, kindergarten and first grade children with examples of eight classes of auditory stimuli ranging from non-verbal abstract (for example, a hissing sound) to a complete sentence, Downing found that all children were confused particularly in their efforts to distinguish phonemes and syllables from words. Thus he states that most beginning readers do not understand linguistic concepts such as "word," and suggests that teachers would do well to help students develop these basic concepts of language.

Durkin, Dolores. Children Who Read Early. New York: Teachers College Press, 1966.

"Children who read early: are not, Durkin informs us, from wealthy, privileged families, not do they possess superior I.Q.s; rather they come from a wide range of socioeconomic backgrounds, and show great variation in their I.Q. scores. However, they do share certain characteristics, as Durkin found in her study of more than two hundred early readers. For instance, their families respond to all their questions about written language, taking time to assist them in their efforts to read and write. Furthermore, their parents and siblings tend to be avid readers themselves. In addition, these early readers often do much of their intial exploration of written language through writing and drawing, and ask numerous questions about spelling, sound-letter relationships, etc. Thus, in this relaxed environment, surrounded by print and loving families who are eager to assist them, children learn to read.

Ehri, Linnea C. "Word Consciousness in Readers and Prereaders," Journal of Educational Psychology, Vol. 67, No. 2, 1975.

Does learning to read bring about a major change in children's metalinguistic awareness, specifically in their awareness of the constituents of speech? With this question as the focal point of her inquiry, Ehri presented preschool prereaders, kindergarten prereaders, and first grade readers with four tasks. Readers, out performing both groups of prereaders, were "better able to embed words in verbal contexts, to segment sentences into words and syllables, to identify the word distinguishing two otherwise identical sentences and to identify words containing particular final syllables." It appears that children's experience with print enhances their metalinguistic awareness; however, Ehri is cautious in mentioning that the increased age and maturity of the readers may also attribute to their superior lexical-analytic abilities.

Forrester, Anne D. "What Teachers Can Learn From 'Natural Readers'," The Reading Teacher, Vol. 31, No. 3, November 1977, pp. 160-166.

Forester reviews several case studies of "natural readers" - children who learn to read without formal instruction - and notes the common features of theri individual experiences. Reading develops as naturally as speaking for these youngsters who grow up in homes where their questions about reading are willingly answered. Rich and varied experiences with print - choral reading, songs and nursery rhymes, reading labels, read-along-stories, and the like--are daily fare. From this exciting exposure to the world of print emerge expressive and fluent readers. Forester maintains that the natural learning strategies used by children who learn to read at home can be equally effective in the classroom.

Goodman, Kenneth and Yetta Goodman. "Learning to Read is Natural." Paper presented at Conference on Theory and Practice of Beginning Reading Instruction, Pittsburgh, April 13, 1976, and in Theory and Practice of Early Reading (Vol. 1), Resnick and Weaver (eds.), Hillsdale, New Jersey: Erlbaum Associates.

Just as children acquire oral language easily and naturally within the "noisy" communicative setting they share with parents, siblings, and others, so they can acquire written language in a literate environment that "shouts" with print. Growing up in a literate society, children are surrounded by print and as young as two years of age, begin to recognize that print communicates - that it says something. Instruction that builds on children's awareness of and experiences with print, that recognizes children's desire and need to communicate and understand others' communication, can do much to facilitate the development of literacy.

Harste, Jerome C., Carolyn L. Burke and Virginia A. Woodward. "Children's Language and World: Initial Encounters with Print." Ditto copy, March 1979. To be published in Langer, Judith and Margaret Smith-Burke (eds.), Bridging the Gap: Reader Meets Author.

Written language development is a socio-psycholinguistic process. This main thesis rests upon data collected from children three to six years of age who were given several reading and writing tasks including reading labels and logos in three different contexts, writing everything they could, and dictating stories. Through the children's responses we are led to understand that: 1) "children develop models of written language from natural, on-going excounters with print in their environment; 2) meaning not only forms one of the three language systems but constitutes the only functional purpose for the development of language and 3) the functions which children develop for language remains constant even as the forms of language change."

Krippner, S. "The Boy Who Read at Eighteen Months," Exceptional Child, 1963, Vol. 30, pp. 105-109.

Larry Wilson was just eighteen months old when, looking at a bottle of medicine, he said, "V-I-C-K-S spells Vicks." Though he was blessed with a superior I.Q. and visual memory, his early reading ability was facilitated by supportive parents, both avid readers themselves, who were ready and willing to answer all his questions about reading. In addition, Larry was very much aware of print in the environment and on television, and he had access to many good books. It's no coincidence that Larry's home environment matches those of the early readers Dolores Durkin studies.

Reger, Roger. "The Child Who Could Read Before He Could Talk," Journal of School Psychology, 1966, Vol. 4, No. 2, pp. 50-55.

The role environmental print plays in beginning reading is dramatically illustrated in this case study of a second-grade boy who was reading around the age of twelve months before he could talk. Matching household items to items he saw advertised on television, he became aware of the characteristics and function of print. At the age of two he was reading street signs and by the age of three he was a regular reader of the newspaper. More research is needed to access the impact of environment on emerging reading behavior.

Reid, Jesse F. "Learning to Think About Reading." Educational Research, 9, 1, pp. 56-62. 1966.

Reid interviews twelve, five-year-old children about their concepts of reading and writing and explores the extent to which their knowledge of the "technical vocabulary" of written language may affect their developing literacy. It is clear from her subjects' answers that their notions about reading and writing often do not match those the teacher may assume they have. For instance, they often use linguistic terms interchangeably, calling "letters," "numbers" and "words," "names." Also, Reid reports that they seem uncertain of what reading is all about; what it consists of, what purpose it serves, the relationship between reading and writing and so forth. Reid suggests that teachers should consider their students' ideas about written language before plunging them into an instructional program that may make very little sense to them.

Soderbergh, Ragnhild. Reading in Early Childhood: A Linguistic Study of a Preschool Child's Gradual Acquisition of Reading Ability. Washington, D.C.: Georgetown University Press, 1977.

Ragnhild Soderbergh, writing from the special perspective of linguist and mother, details and interprets the process of early reading as observed in her young daughter from the ages of 2.4 to 3.5. She relates her findings to linguistic research on language acquisition and beginning reading, and also brings in the work of different reading specialists with conflicting views. She concludes that literacy may be attained easily and naturally when it is introduced during the period when the child's capacity for language is the greatest - between the ages of two and four.

Torrey, Jane W. "Learning to Read Without a Teacher: A Case Study," Elementary English, Vol. 46, No. 5, May 1969, pp. 550-568, Also in Psycholinguistics and Reading, Frank Smith (ed.), Chicago: Holt, Rinehart and Winston, Inc., 1973, pp. 147-157.

"Reading is learned not taught." Thus Torry concludes her case study of John, a five-year-old child who learned to read and write on his own before he entered kindergarten. Like the early readers in Durkin's study, John spent long hours printing words and numbers, and was an avid reader of television commercials and the labels on cans stored in the kitchen. Torrey reports that John always read with natural intonation patterns in his own Black-English dialect. He skipped over or slurred words that he didn't know; he never attempted to sound them out letter by letter. For this reason, Torrey maintains that print made sense to John; he expected it to say something to him just like spoken language. Lest skeptics credit John's ability to an extraordinary IQ, Torrey provides careful documentation of his family background (low socio-economic; parents had limited formal education) together with test scores which reveal only average verbal ability and intelligence. It appears that numerous opportunities to interact with print may be the key to learning to read.

Ylisto, Ingrid. "Early Reading Responses of Young Finnish Children," The Reading Teacher, Vol. 31, No. 2, November 1977, pp. 167-172.

Ylisto challenges the phonics approach to reading instruction, and the importance of a highly regular orthography as an aid to beginning reading. Basing her position on the early reading responses of four, five and six-year-old Finnish students, Ylisto notes that these children learned to read "naturally" in a print-rich environment by "discovering for themselves that printed words are substitutes for audible symbols used to identify objects, actions, and situations (p. 168)." For these children sounding-out" was separate from reading. Meaning always preceded sounding in word recognition. Ylisto cautions that prescriptive reading packages that emphasize sound-letter relationships may run counter to children's own natural learning strategies.

PROGRAM IN LANGUAGE AND LITERACY
ARIZONA CENTER FOR EDUCATIONAL RESEARCH AND DEVELOPMENT
COLLEGE OF EDUCATION
UNIVERSITY OF ARIZONA

The Program in Language and Literacy is an innovative effort to provide a center for a variety of activities dedicated to better knowledge of development in language and literacy and more effective school practice. The program is concerned with language processes as well as learning and teaching of language.

Activities of the program have several main concentrations:

Research on oral and written language -
- on development of oral and written language.
- on teaching for effective use of oral and written language.
- on curriculum for language growth and use.
- on bilingual, bicultural, biliterate language development, language instruction.
- on issues of adult basic literacy.

Theory development in oral and written language processes.
Acquisition and instruction of oral and written language processes.
Development of curriculum and methodology for effective monolingual and bilingual school programs.
Support for language and literacy components of pre-service teacher education programs.
In-service programs to help teachers, curriculum workers, and school administrators to achieve more effective programs in language and literacy.
Consultation to school systems and other agencies to plan and evaluate more effective programs in language and literacy.
Graduate courses, seminars, minors and combined majors in educational linguistics to help educators become more effective as teachers, curriculum workers material developers and teacher educators.
Conferences, workshops, symposia to provide dialogue among researchers, disseminators and practitioners.
Publications including working papers, position papers and research reports.

The program focuses on written language. Written language is a receptive and productive process in a literate society where people have the alternative of using oral language in face-to-face situations or written language over time and space.

The program is cross-disciplinary. It draws on a wide variety of bases-sociology, sociolinguistics, psycholinguistics, and areas of psychology-so that we can understand the learning of language and cognition and see the relationship of thought and language. We draw from other disciplines as well on neurology, physiology, and of course pedagogy, the study of education itself. The Program in Language and Literacy is a program in educational linguistics.

Staff:

Dr. Kenneth S. and Yetta M. Goodman, Co-directors
Faculty, Elementary Education, University of Arizona, Tucson

Lois Bird, Research Assistant, Series Editor
Claudia Dybdahl, Research Assistant
Jane Disinger, Research Assistant
Judith Enz, Associate
Suzanne Gespass, Research Assistant
Myna Haussler, Research Assistant
Jay Walker, Research Assistant
John Woodley, Research Assistant
Diane Barajas, Secretary

Occasional Papers

Program in Language and Literacy
Arizona Center for Research and Development
402 Education, Bldg. 69
College of Education
University of Arizona
Tucson, AZ 85721

Price per copy: $ 2.00 each
plus .50 mailing for each order
Payable to Program in Language and
Literacy, University of Arizona

No. 1: Goodman, K.S. and Goodman, Y.M. A Whole-Language Comprehension Centered View of Reading Development. A position paper, February, 1981.

No. 2: Goodman, K.S. and Gollasch, F.V. Word Omissions in Reading: Deliberate and Non-Deliberate. A research report, March, 1981.

No. 3: Altwerger, B. and Goodman, K.S. Studying Text Difficulty Through Miscue Analysis. A research report, in press.

No. 4: Goodman, Y.M. and Altwerger, B. A Study of Literacy in Preschool Children. A research report, in press.